

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of enhancing a mold, die, or tool, comprising the steps of:

providing a mold, die or tool having a body with a working surface;

the body being composed of aluminum or an alloy thereof; and

modifying the body, the working surface, or both, of the body through the application of a metallurgically bonded molybdenum alloy directly from CAD data using a closed-loop, direct metal deposition (DMD) process.

2. (Original) The method of claim 1, wherein at least a portion of the working surface is modified to improve wear resistance.

3. (Original) The method of claim 1, wherein at least a portion of the working surface is modified to improve resistance to dissolution during a die casting operation.

4. (Original) The method of claim 1, wherein at least a portion of the working surface is modified to improve oxidation resistance.

5. (Original) The method of claim 1, wherein at least a portion of the body is modified to incorporate cooling channels to improve thermal management.

6. (Original) The method of claim 1, wherein at least a portion of the body is modified to incorporate conductive heat sinks or thermal barriers to improve thermal management.

7. - 8. (Canceled)

9. (Currently Amended) The method of claim [[8]] 1, wherein at least a portion of the body is cast aluminum-silicon.

10. - 11. (Canceled)

12. (Withdrawn) The method of claim 10, further including a nickel alloy bond coat for improved service life for die casting of low melting point materials such as Zn alloys.

13. (Withdrawn) The method of claim 1, further including a steel working surface.

14. (Currently Amended) The method of claim 1, wherein the closed-loop DMD process is based upon a robotic implementation [[to]] of the DMD process ~~three dimensional objects having a large mass and/or complexity.~~

15. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 1.

16. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 2.

17. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 3.

18. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 4.

19. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 5.

20. (Withdrawn) An enhancing a mold, die, or tool fabricated in accordance with the method of claim 6.